

ATTORNEY DOCKET No. 02-064CIP (ANSI01-00012)  
U.S. SERIAL NO. 09/500,213  
PATENT

**AMENDMENTS TO THE CLAIMS:**

1        1. (Currently Amended) A neurostimulating lead comprising:

2                (a) a body member having a length, a wall, a proximal end and a distal end;

3                (b) at least one conductor embedded within the wall of the body member and

4                extending the length of the body member;

5                (c) at least one tunnel extending from an outer surface of the body member to the at

6                least one conductor;

7                (d) at least one thin film electrode deposited on the outer surface at the distal end of

8                the body member; and

9                (e) an electroplated conductive link extending through the at least one tunnel from

10               the at least one conductor to the at least one thin film electrode.

1        2. (Previously Amended) The neurostimulating lead, as in Claim 1, further comprising at

2               least one connector having a contact electrically joined to the at least one conductor at the

3               proximal end of the body member and adapted to connect the lead to a neurostimulator.

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1       3. (Previously Amended) The neurostimulating lead, as in Claim 1, wherein the body  
2       member is tubular, having an annular wall defining an internal lumen extending between the  
3       proximal end and the distal end with the at least one conductor being spiral wound and  
4       embedded in the annular wall.

*B*  
1       4. (Previously Amended) The neurostimulating lead, as in Claim 3, wherein the body  
2       member comprises polyurethane and has an outer diameter of about 2 French and an internal  
3       diameter of about 0.012 inch.

1       5. (Previously Amended) The neurostimulating lead, as in Claim 4, wherein the at least  
2       one conductor has said conductors have a substantially rectangular cross-section, about 0.004  
3       inch wide by about 0.002 inch high.

1       6. (Previously Amended) The neurostimulating lead, as in Claim 5, wherein the at least  
2       one conductor comprises metal, and wherein the metal is selected from the group consisting of  
3       stainless steel, MP35N, titanium, tantalum, tungsten, platinum, and silver.

1       7. (Previously Amended) The neurostimulating lead, as in Claim 3, wherein the at least  
2       one conductor comprises turns, with each turn being at an angle between about 10 degrees to  
3       about 80 degrees from a longitudinal axis of the body member.

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1        8. (Previously Amended) The neurostimulating lead, as in Claim 7, wherein the at least  
2        one thin film electrode is electrically connected by the at least one conductive link to the at least  
3        one conductor.

1        9. (Previously Amended) The neurostimulating lead, as in Claim 7 wherein the at least  
2        one thin film electrode spans and is electrically connected by the at least one conductive link  
3        to more than one turn of the at least one conductor.

10. (Previously Canceled)

1        11. (Previously Amended) The neurostimulating lead, as in Claim 1, wherein the  
2        electroplated conductive link comprises a metal selected from the group consisting of gold,  
3        silver, platinum, platinum-iridium and titanium.

12. (Previously Canceled)

13. (Previously Canceled)

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1 14. (Previously Amended) The neurostimulating lead, as in Claim 1, wherein the at least  
2 one thin film electrode includes a first segment and a second segment disposed along a  
3 longitudinal dimension of the body member in overlapped relation, the first segment and the  
4 second segment adapted to be electrically connected to a one of a voltage of positive polarity,  
5 a voltage of negative polarity, and zero voltage.

1 15. (Previously Amended) The neurostimulating lead, as in Claim 1, wherein the at least  
2 one thin film electrode comprises multiple superposed nanocrystalline metal layers with an  
3 innermost layer of a metal selected from the group consisting of titanium, chromium, nickel and  
4 aluminum and having a thickness less than about 5 microns, a layer adjacent the innermost layer  
5 of a metal selected from the group consisting of lead and platinum and having a thickness  
6 between 500 angstroms and 50 microns, the outermost layer of a metal selected from the group  
7 consisting of gold, platinum and platinum-iridium and having a thickness between 500  
8 angstroms and 50 microns, and a layer adjacent the outermost layer of a metal selected from the  
9 group consisting of gold, platinum, platinum-iridium, silver and copper and having a thickness  
10 between 500 angstroms and 50 microns.

16. - 35. (Canceled/Previously Withdrawn)

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1       36. (Previously Added) A neurostimulating lead comprising:  
2               (a) a body member having a length, an outer surface, a proximal end and a distal end;  
3               (b) at least one conductor extending the length of the body member;  
4               (c) at least one electrode positioned on the outer surface at the distal end of the body  
5       member; and  
6               (d) an electroplated conductive link extending from the at least one conductor to the  
7       at least one electrode.

*B1*  
1       37. (Previously Added) The neurostimulating lead, as in Claim 36, further comprising a  
2       plurality of tunnels extending through a wall of the body member from the at least one  
3       conductor to the electrode, each of the plurality of tunnels including an electroplated conductive  
4       link for electrically connecting the at least one conductor to the electrode.

1       38. (Previously Added) The neurostimulating lead, as in Claim 37, wherein the at least one  
2       conductor comprises turns, with each turn being at an angle between about 10 degrees to about  
3       80 degrees from a longitudinal axis of the body member.

1       39. (Previously Added) The neurostimulating lead, as in Claim 36, wherein the at least one  
2       conductor is embedded within a wall of the body member.

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1 40. (Previously Amended) A neurostimulating lead comprising:

2 (a) a body member having a length, an outer surface, a proximal end and a distal end;

3 (b) at least one conductor extending the length of the body member;

4 (c) at least one electrode positioned on the outer surface at the distal end of the body

5 member; and

6 (d) an electroplated conductive link formed during an electroplating process and

7 extending from the at least one conductor to the at least one electrode, the electroplated

8 conductive link comprising a metal selected from the group consisting of gold, silver, platinum,

9 platinum-iridium and titanium.

1 41. (Previously Added) The neurostimulating lead, as in Claim 40, wherein the at least one

2 conductor is embedded within a wall of the body member and the electroplated conductive link

3 extends through a tunnel from the at least one conductor to the electrode.

1 42. (Previously Added) The neurostimulating lead, as in Claim 41, wherein a plurality of

2 electroplated conductive links extend from the at least one conductor to the electrode.